

**Notice of Allowability**

Application No.

10/672,774

Examiner

Ryan P. Fiegle

Applicant(s)

CHEN ET AL.

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03 April 2006.
2. ☒ The allowed claim(s) is/are 1-58.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 3242006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

***Specification***

1. The examiner acknowledges and accepts the amendment of the title.

***Claim Objections***

2. The examiner acknowledges with gratitude the corrections to the claims to fix grammatical errors.

**EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Wiggins on 4/14/06.

4. Please amend claim 12 to read "...a first arithmetic logic unit (ALU)..." rather than "a first arithmetic logic (LU)..."

***Allowable Subject Matter***

5. The following is an examiner's statement of reasons for allowance:

Upon an updated search, the examiner could not find any prior art with “a reorder buffer including N buffer location of which M buffer locations are bypassable and N-M buffer locations are non-bypassable, wherein N and M are integers and  $N > M > 0$ .”

The closest the examiner could find to a “non-bypassable” entry was addressed in the first office action in reference to Hennessy where a scoreboard points to a location of where an FXU can find an operand rather than actually passing the operand itself.

Chamdani et al. (US Patent 6,112,019) discloses a reorder buffer wherein all entries are treated as in Hennessy, where the reorder buffer points to a location to find an operand (column 64, lines 50-58). The examiner considered when it would be advantageous to combine this aspect with a normal reorder buffer that keeps values themselves in the entries.

The examiner considered a situation where a 32-bit architecture is updated to support a minimal amount of 64-bit operands. Rather than extending all the entries in a reorder buffer for worse case, or providing complex logic to hold a value on multiple entries, the designer could simply point to a location to find the long operand.

However, it is the opinion of the examiner that this situation would ***not*** be able to read on the claims because the claims state “a reorder buffer including N buffer locations **of which M buffer locations are bypassable** and N-M buffer locations are non-bypassable, wherein N and M are integers and  $N > M > 0$ .”

It is the opinion of the examiner that this would reasonably lead one of ordinary skill in the art, in the broadest reasonable interpretation, to the correct conclusion that

the number of bypassable entries is **determined**. It is decided by a user, control logic or operating system routine. It is then set until it changed. However, in the hypothetical situation suggested above, the number of bypassable and non-bypassable entries is dynamic, dependent on the program's control flow.

This applies to all independent claims, therefore claims 1-58 have been found allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chamdani et al. (US Patent 6,112,019) teaches non-bypassable entries.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Fiegle whose telephone number is 571-272-5534. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on 571-272-4162. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan P Fiegle  
Examiner  
Art Unit 2183



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